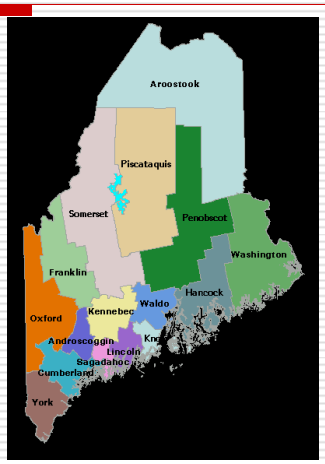
Energy Management Roundtables for Water and Wastewater

Maine
2010-2011



"Someone Has to Care"

- If you have a block allocation for O&M, reduction of energy costs means more money for products you need
- Get to know your energy supplier
- Ask about new opportunities to reduce costs from the experts
- Get help tracking and improving energy efficiency

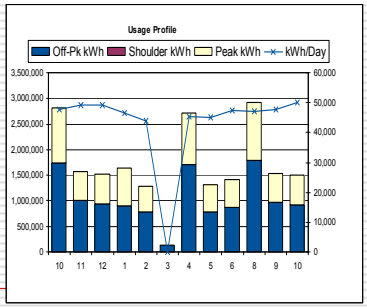
Do You …

- Want to provide the best possible water quality at a reasonable price …
- Know that any design no matter how well intentioned can be improved to optimize the finished product …
- Know that often times energy improvements can be accomplished with existing staff at a reasonable cost?

Roundtable Participants have shared these findings

Find out how to review Energy Use

- Major Bill Components
  - General Definitions
  - Energy Definitions
  - Demand Definitions
  - Power Factor Definitions
  - Load Factor Definitions
  - Discounts/Adjustments
  - Bill Analysis Tools



Get Information on Typical Operations and Opportunities to Save

WWTF Operation	% of Energy Consumption	
	min	max
Secondary Treatment including Aeration	40%	65%
Solids Dewatering	15%	30%
Influent and Effluent Pumping	8%	15%
Plant Auxilliary systems	5%	15%
Primary Treatment	3%	10%
HVAC	5%	8%
Lighting	3%	8%

* From Narragansett Bay Commission Energy Management Round Table

Compare your Use to Average Energy Benchmarks

Type of Facility	Benchmark Value		Source
	(kWh/MG)	(kBtu/yr/gpd)	
Sewage Lift Station	150	0.19	Consortium for Energy Efficiency (CEE)
Sewage Lift Station	295	0.37	CDH Energy Corporation (CDH) with NYSERDA
Sewage Lift Station	420	0.52	CDH (Iowa)
UV Disinfection to 200 MPN/100 ml	367	0.46	PG&E 2/28/02 Report
Secondary WWTF	1,050	1.31	Portfolio Manager, CEE
Secondary WWTF	1,300	1.62	Water Wastewater Competency Center (WWCC)
Water Treatment and Distribution	1,605	2.0	Portfolio Manager
Activated Sludge with Nirtification	1,900	2.37	WWCC
BNR Tertiary Treatment	2,487	3.10	Portfolio Manager
Conversion Factor	0.2928292	kWh/kBtu	

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Learn about Energy Upgrades – Costs and Payback

Projections for Various Energy Efficiency Projects

POTW	Description of Energy Efficiency Project	Total Cost[1]	Savings (kWh/yr)	Payback Period[2] (yr)
Onondaga County, NY	Retrofitted VFDs on activated sludge pump motors, reduced aeration basin blowing and improving efficiency of some pumps	$230,000	2,800,000	0.8
NBC	Lighting upgrade at Corporate Office Building	$84,243	63,419	13.3
Bucklin Point	Efficient Blower Selection	$322,920	618,757	5.2
Bucklin Point	Optimal DO and Blower Control	$417,890	502,416	8.3
Bucklin Point	VSDs on Recycle Pumps	$15,488	81,858	1.9
Fields Point	VSDs on Blowers 1, 2 & 3	$165,675	198,345	8.4
Fields Point	Power Washing Diffuser Heads	$6,840	25,266	2.7
Fields Point	Pitot Tube Air Station Sensors	$14,000	24,788	5.6
Note[1]: Cost does not include utility incentives		$157,132	539,356	5.8
Note[2]: based on $0.10 /kWh savings				

* From Narragansett Bay Commission Energy Management Round Table

Water, Wastewater Programs

Plan-Do-Check-Act ::::: Energy Management

- Successes and obstacles in energy improvements
- Making Sense of Energy Bills
- How to Use Benchmarking to Drive Performance
- Energy assessment tools
- Experiences of water and wastewater utilities
- Energy Audit Results from wastewater and water plants
- Green Roofs
- Green Set Aside Funds under SRF Program
- Example of using Portfolio Manager to Measure and Track Performance
- High Efficiency Pumps
- Proposed Solar Project at Water Utility
- Installed Solar Project at Wastewater Treatment Facility
- Energy Efficiency Program at WWTP

Interested in Participating in Energy Program Roundtables?

Sign Up For More Information On the Back of Your Evaluation or at Your Table, Provide Your Contact Information On The Blue Form

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